# MASTERCHESS

## LOADING INSTRUCTIONS

Reset the computer by holding down the CTRL, SHIFT and ESC keys together in that order. Place the cassette into the Datacorder. Rewind the tape to the beginning, then press STOP/EJECT once. Press the CTRL and small ENTER keys simultaneously, then press PLAY followed by any key. The program will take about 5 minutes to load. Playing instructions will then appear on the screen.

Masterchess is an advanced chess program written entirely in Z80 machine code. A graphic display of the chessboard and pieces is presented on the screen, together with an indication of the current level of play and a history of the thirteen most recent pairs of moves for reference. While calculating a move, the program indicates the total number of legal moves it has found and how many it has already evaluated. This gives the player an indication of how long the program will take to finish its evaluation. At any time during the evaluation, the player can instruct the computer to stop and play its current best move.

The colours of the display can be easily altered to suit the player.

Ten levels of play are available, the lowest offering almost immediate response and the highest searching up to eight moves ahead.

All legal moves are recognised, including castling and en-passant; illegal moves such as castling through check will be rejected.

An opening book of some six thousand moves is contained in the program, providing both width and

depth; the book extends twenty nine ply on certain openings.

A fully automatic chess clock is displayed above the chess board, indicating the time taken by the player and computer.

The program offers numerous features and facilities. These are readily understood and remembered as all options are listed on the screen when they are valid. Only single keys are needed to select any option (the first letter of the option word), and the program will accept only those entries which are valid at that time. Any further input required will be prompted by the program.

## THE MAIN MENU

PLAY - to start a new game. You will first be asked to choose white or black and then the level of play. The board will be set up with your selected colour playing from the bottom of the board. See the Play menu description for details of the subsequent options.

RESUME - allows you to continue your game at the current position after having returned to the main menu for any reason. You will be asked which colour you wish to play and which colour is to have the next move.

COLOUR - this option allows you to alter the colours of the board and pieces if you do not like the standard settings. Answer each of the four colour questions with a number from 0 to 26.

SAVE - to save a game on tape. You will be asked to press RECORD and PLAY and then to press any key. Please ensure that a cassette is in place and correctly positioned before you do so and don't forget to press STOP when it has finished.

LOAD - reloads a previously saved game. You will be prompted to press play, then any key. When the tape has finished loading, the board and move history will automatically be set up exactly as it was when the game was saved. You can now use the Resume option to continue your game.

MODIFY - this option allows you to alter the board, either to correct a wrong move or to set up a chess problem. See the Modify menu description for details of how to carry this out.

## THE PLAY MENU

The following keys are applicable when the program is waiting for you to move.

A-H,1-8 - Your moves should be entered by specifying the column and row you wish to move from and the column and row you wish to move to. You will see that the columns (or files) are clearly marked with the letters A - H and that the rows (or ranks) are labelled with numbers 1 - 8. As an example, to move the white King's pawn forward 2 spaces to start a game, enter E2E4. The program will inform you if you are making an illegal move and you should then enter a different move.'

DEL - If at any time before entering the last character you realise that a mistake has been made, pressing the DEL key will allow you to re-enter the move.

LEVEL - pressing L allows you to alter the level of play; you will be prompted for the new level.

RECOMMEND - The program will recommend the move it would have made had it been in your position and at the current level of play.

XIT - exit to the main menu to save a game, set up the board, restart etc. The current game can be re-entered with the Resume command.

In addition, the key M for Move is recognised by the

computer while it is evaluating its own move. Pressing this key will force the computer to stop its evaluation and play the best move it has found so far.

## THE MODIFY MENU

When you enter the modify mode, you will see one of the squares in the centre of the chessboard flash briefly. This is the 'active' square.

Use the cursor keys to move the active square position to wherever you like on the chessboard.

The new active square will flash briefly.

DEL - Delete the piece at the current active square. Has no effect if there is no piece on that square.

CLR - Clear the entire chessboard of pieces. This is primarily of use when setting up a chess problem, as it saves having to individually delete each piece from its original position.

LEVEL - exactly as the same option in the Play menu; allows you to alter the level of play before you resume play.

K,Q,R,B,N,P - Allows you to place a King, Queen, Rook, Bishop, Knight or Pawn respectively at the current active square. You will be prompted for the colour of the piece and asked if it has moved yet. Please answer this last question carefully as it is used to determine the legality of certain moves and the desirability of some others.

XIT - exit to play game, using the current position. Before you play, you will be asked for your colour and which colour is to move next.

## NOTES

The time taken by the computer to calculate its move increases with the level it is playing at. Approximate times for each level are:-

| | | | |
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| Level 0 | - 5 secs | Level 1 | - 10 secs |
| Level 2 | - 30 secs | Level 3 | - 1 min |

| Level 4 | – 3 mins | Level 5 | – 5 mins |
| Level 6 | – 15 mins | Level 7 | – 2 hours |
| Level 8 | – 15 hours | Level 9 | – 2 days |

These times will vary considerably depending on the complexity of the position, being generally longer during mid game play and shorter in the end game. If you accidentally choose a level which takes too long, the 'M' key can be used to force the computer to move. However, if you use this facility, the computer will not have made the best use of its computing time. You should therefore try to avoid using it on a regular basis by selecting a level appropriate to the time you wish to spend.

The computer holds a large library of opening moves. As long as play remains within the book the computer's moves will be produced very rapidly. The higher levels are intended mainly for problem solving. The best levels to use for this purpose are:-

Mate in 2 - Level 4

Mate in 3 - Level 7

Mate in 4 - Level 9